

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

THE SMALLEST KNOWN LEAF HOPPER.

BY E. D. BALL.

The writer received from Mr. Moznette some time ago a number of very minute pale leaf hoppers said to be attacking the avocado at Miami, Florida. This proved to be an *Empoasca* and not only the smallest species in that genus but also the smallest leaf hopper yet described. Later sendings of material included examples highly ornamented with black stripes and markings of a very variable amount, two of the most stable patterns of which have been designated as *varieties*. It is very likely that this species will prove to be an introduced one peculiar to the avocado.

Empoasca minuenda, n. sp.

Golden or pale yellow, minute, with a roundly right-angled vertex. Length, 2 mm.

Vertex distinctly produced, roundly right-angled, shorter than its basal width, broadly rounding to the front. Pronotum slightly longer than the vertex. Elytra longer than in *typhlocyboides*, resembling *mali* in form. Venation of hind wing typical; elytron with the first apical cell very broad and extending nearly one-third its length beyond the base of the second cell which is parallel margined; the third cell very variable, usually small and triangular but varying to long and parallel depending on whether the second and third nervures arise as a single nerve and forking later or as separate nervures which in extreme cases are parallel.

Color.—Varying from a pale lemon to golden yellow with the scutellum touched with orange and white. Eyes fuscous, tip of ovipositor often brown above. The more golden specimens often show a pruinose white area midway on the costa.

Genitalia.—Female segment moderately rounding posteriorly, the margin entire. Male plates long, triangular, the attenuate tip curved upward and slightly individually rounded at the apices.

Described from eight examples from G. F. Moznette, taken on avocado at Miami, Florida. Type ♀ and allotype ♂ in the author's collection, paratypes in the author's and Mr. Moznette's collection.

***Empoasca minuenda* var. *moznettei*, n. var.**

Size and form of *minuenda*, golden or lemon yellow with a variable number of oval black spots. Usually a widely separated pair of spots on the disk of the pronotum, a larger and adjacent pair on the scutellum and a similar pair on the first three or four abdominal segments. Each elytron may have six spots, three on the costa, two on the claval suture and one on the corium. The first costal spot is at the base, the other five spots form a square with a central dot; two specimens show traces of fuscous clouds in the apical cells.

Described from six examples received with the others.

***Empoasca minuenda* var. *clavigerana*, n. var.**

Similar to variety *moznettei* in form and color but with additional marking forming two dark brown stripes extending from just back of the vertex margin across the pronotum, scutellum and along the inner margin of the elytra. The stripes are narrow and definite on the vertex where they are separated by about their own width, on the pronotum they often widen and rarely fuse, on the scutellum they usually fuse except for a single light spot. In light examples these stripes are often interrupted appearing as elongate spots on vertex and pronotum.

Described from six examples from Miami, Florida. Type distribution of both varieties the same as for the species.